WORK INSTRUCTION

Title: **Axial Play Measurement (OCV Lid to Body) (ICV Lid to Body) and Wear Pad Replacement**

Instruction No. CH.08 Rev. 0, January 2002

Approved for Use by: Michael R. Brown Effective Date: January 2002

Applicable Drawings:
- 2077-500SNP (Sheets 1, 7, & 8) - TRUPACT-II Packaging SARP Drawings
- 707-SAR (Sheets 1, 6, & 10) - HalfPACT Packaging SARP Drawings

SARP Requirements:
- Chapter 8.0, “Prior to first use and annually thereafter.”
- Wear pad replacement has no SARP requirements.

Tools Required:
- OCA Lid Measuring Band
- OCA Body Measuring Band
- ICV Lid Measuring Band
- ICV Body Measuring Band
- Trammel Beam with Points
- Level (~ 2ft)
- Optical Comparator
- ICV Lid Stand
- ICV Work Platform
- OCA Lid Stand
- Straight Edge (~ 2 ft)
- Vacuum/Pressure Gauge

Spare Parts Required:
- Wear Pad . . . . . (PN 2077-156-23)

Materials Required:
- Low Chloride non-permanent Marker
- Lint-Free Rags
- Denatured Alcohol or equivalent

Safety Requirements:
- Safety will be observed in accordance with site requirements.

Prerequisite Conditions:
- ICV and OCV lids are installed on their respective bodies.
- Locking rings are in the locked position.
- The ICV may be removed from the OCV prior to start of OCV measurements or the OCV measurement may be performed with ICV installed.

Instruction Steps:

1.0 Record all data from this instruction on the attached data sheet (Attachment 2 to this instruction).
2.0 This instruction **is not required to be attached** to the Maintenance Record but may be used as a checklist during performance of Maintenance.
3.0 The replacement of parts shall be documented on a **Maintenance Record.**

NOTE: The measuring bands have been designed so that the numbers are located at the approximate center of the locking lugs. If the measuring bands move prior to completion of step 10, return to step 1. Figures in the attachment show correct set-up for applicable steps.

1.0 Install OCA body measuring band (Attachment 1, Figure A) approximately 1-in. below the actuator ring. Ensure that the band fastening device gap is located at the approximate center of the vent port access and that the top edge of the measuring band is approximately parallel to the bottom edge of the actuator ring. Tighten the fastener so the band will not slip during measurement operations.
2.0 Install the OCA lid measuring band (Attachment 1, Figure A) approximately 1-in. above the actuator ring. Ensure the numbers are axially aligned with the numbers of the OCA body measuring band and the bottom edge of the lid measuring band is approximately parallel to the top edge of the actuator ring. Tighten the fastener on the band so the band will not slip during measurement operations.
3.0 Using the straight edge or level, draw a vertical line from the numbers on the lid measuring band, across the actuator ring to the numbers on the body band.
4.0 Record the Serial number and the Calibration Due date of the Vacuum/Pressure gauge on Attachment 2.
5.0 If not already in place, install vent port tool and vacuum source and evacuate vessel to 10-in. Hg and record gauge reading on Attachment 2, Data Sheet.
6.0 Using the trammel, place one point in the indentation above the numbers on the OCA body band and with the other point, scribe a mark approximately 2 inches long which intersects with the vertical line on the lid band at locations 2, 4, 6, 8, 10, 12, 14, 16, & 18 (see Attachment 1 as an example of the technique).
7.0 Release vacuum and disconnect the vacuum source.
8.0 Install air supply source to vent port tool and pressurize vessel to 10 psig and record gauge reading on Attachment 2, Data Sheet. Repeat Step #6. Ensure scribe marks are below those already made (See Attachment 1, Detail 1).
9.0 Release pressure and disconnect air supply. Attachment 1, Detail 1, shows scribe marks after completion of Steps 5 through 8.

10.0 Using the optical comparator measure the distance between the two scribe marks to the nearest .005 inch at locations 2, 4, 6, 8, 10, 12, 14, 16, & 18, and record on Attachment 2, Data Sheet.

NOTE: If measurement at any location is greater than .150 inch, notify the CH Packaging Maintenance Engineer for resolution.

11.0 Remove OCA lid assembly and place on the stand.

This completes OCA axial play.

12.0 If not already done, remove the ICV from the OCV and place in work stand.

NOTE: The wear pad is only replaced if worn or damaged.

13.0 Remove the wear pad to be replaced and discard.
14.0 If not already marked, locate the center of OCV lower head and mark a 3 in. diameter circle from center mark using a low chloride marking pen.
15.0 Remove backing from wear pad, place pad with adhesive side down so that the 3 in. diameter hole matches the circle on OCV lower head; press firmly from center outward. Ensure the pad has no excessive wrinkles.
16.0 Remove ICV lid and place on stand.
17.0 Remove debris shield from lid and clean the groove using alcohol and lint-free rags.
18.0 Reinstall ICV lid on ICV body.

NOTE: If the measuring bands move prior to completion of step 28, then return to Step 19.

19.0 Install ICV body measuring band (Attachment 1, Figure B) approximately 1 inch below the locking ring. Ensure the fastening device gap is aligned underneath the vent port with the top edge of the measuring band approximately parallel with bottom edge of locking ring. Tighten the fastener on band so the band will not slip during measurement operations.
20.0 Install ICV lid measuring band (Attachment 1, Figure B) approximately 1 inch above the locking ring. Ensure that numbers are axially aligned with the ICV body measuring band, with the bottom edge of lid measuring band approximately parallel with the top edge of the locking ring. Tighten the fastener on the band so the band will not slip during measuring operations.

21.0 Using the straight edge or level, draw a vertical line from the numbers on the lid measuring band, across the locking ring to the numbers on the body band.
22.0 If not already in place, install vent port tool and vacuum system and evacuate vessel to 10 inches Hg and record gauge reading on Attachment 2, Data Sheet
23.0 Using the trammel, place one point in the indentation above the numbers on the ICV body band and with the other point, scribe a mark approximately 2 inches long that intersects with the vertical line on the lid band at locations 2, 4, 6, 8, 10, 12, 14, 16, & 18 (See Attachment 1, Figure B).
24.0 Release vacuum and disconnect the vacuum system.
25.0 Install air supply and pressurize vessel to 10 psig and record gauge pressure on Attachment 2, Data Sheet.
26.0 Repeat Step #23. Ensure scribed marks are below those already made (See Attachment 1, Figure B).
27.0 Release pressure and disconnect air supply.
28.0 Attachment 1, Figure B, Detail 1 shows scribe marks after completion of Steps 22 through 26. Using the optical comparator measure the distance between the two scribe marks to the nearest .005 inch and record on Attachment 2, Data Sheet.

NOTE: If measurement at any location is greater than .150 inch, notify CH Packaging Maintenance Engineer for resolution.

29.0 Remove ICV lid and place on work stand.

This completes ICV axial play.

Verification Requirements:

1.0 Spare parts used are listed on Maintenance Record.
2.0 Work performed is described on Maintenance Record.
3.0 Work Instruction is listed on Maintenance Record.
4.0 Data sheet (Attachment 2) attached to Maintenance Record.

ATTACHMENT 1

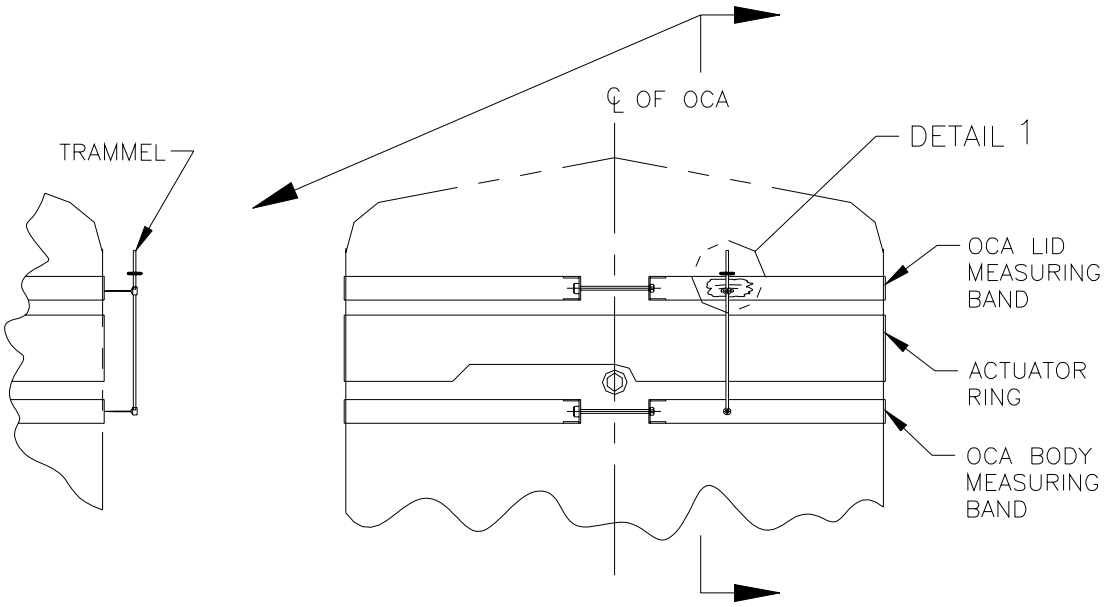
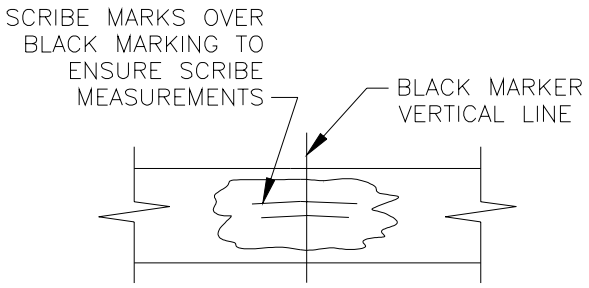


FIGURE A



DETAIL 1
TRAMMEL NOT SHOWN FOR CLARITY

ATTACHMENT 1

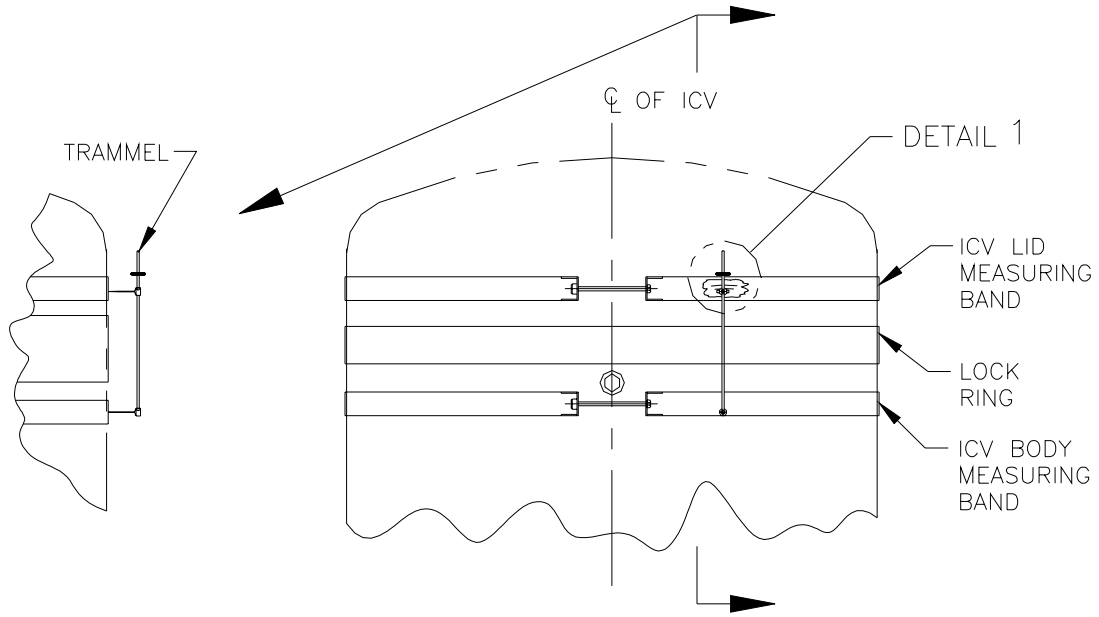
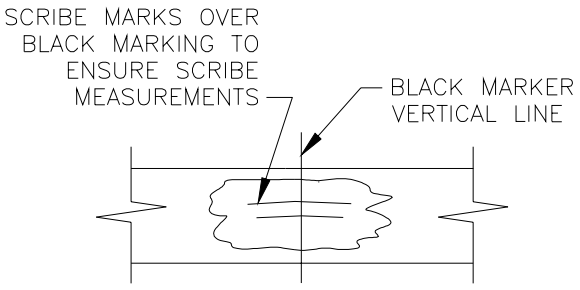


FIGURE B



DETAIL 1
TRAMMEL NOT SHOWN FOR CLARITY

ATTACHMENT 2 - DATA SHEET

Packaging Serial #: _____ Date:_____ Job #:_____				
Step	Reading			Signoff
4	Gauge Serial No. _____ Calibration Due Date _____			QA: _____ Date: _____
5	Vacuum _____ inches Hg			QA: _____ Date: _____
8	Pressure _____ PSIG			QA: _____ Date: _____
10 OCV	2_____ 4_____ 6_____ 8_____ 10_____ 12_____ 14_____ 16_____ 18_____			QA: _____ Date: _____
22	Vacuum _____ inches Hg			QA: _____ Date: _____
25	Pressure _____ PSIG			QA: _____ Date: _____
28 ICV	2_____ 4_____ 6_____ 8_____ 10_____ 12_____ 14_____ 16_____ 18_____			QA: _____ Date: _____
	Optical comparator S/N.: _____ Calibration Due Date: _____			QA: _____ Date: _____
	MEASUREMENTS:	SAT	UNSAT	
	OCV			QA: _____
	ICV			Date: _____